

Memo

To: Matt Hart, Town Manager

From: John Phillips, Director of Public Works

CC: Kim Holden, Operations Manager

Date: June 11, 2018

Re: Recommendation to pilot a Save Money and Reduce Trash (SMART) program

## Executive Summary

Connecticut's capacity for trash disposal is maxing out and it's difficult to site new facilities. Continuing to generate the same amount of waste is a costly option and the cost of waste management is going up and will continue to increase. At the same time the Town is under pressure to reduce municipal taxes and curb spending. Further, the State of Connecticut has a goal to divert 60% (from 35%) of solid waste by 2024.

A SMART (Save Money and Reduce Trash) program is a solution that reduces trash, reduces disposal costs and gives residents more control over their budget than fees or tax increases.

Under a SMART program it is estimated the Town would save over \$560,000 in tip fees and generate revenues of about \$1.66 million in the first year. The net benefit to the Town would be \$2.2 million. Various options would be available for the usage/application of the additional funds generated under this program, including the following:

- **Enhance the yard waste collection program.** This would have a direct impact on reducing tip fee costs which will, in turn, reduce general fund expenditures.
- **Increase pavement preservation programs.** This investment would mitigate future operating costs associated with street maintenance and repair projects.
- **Purchase equipment related to waste management activities.** Since one source of CNRE funding is a contribution from the general fund, this would also help reduce future costs.
- **Explore usage of funds for capital projects related to waste management activities.** There may be opportunities for some smaller capital projects to be direct funded rather than utilizing capital funds, which in turn would have a positive impact on our future debt service payments.
- **Utilize the funds for programs that will have an immediate impact on reducing the Town's operating budget as well as targeting some of the funds for tax relief purposes.** Based on the current mill rate and value of a mill, for every \$308,000 of non-tax revenue or savings generated, the mill rate would be reduced by .05 mills. For example, of the \$2.2 million of projected savings/revenue generated under this program, if \$1 million is used for the expansion of waste collection programs/capital purchases, the remaining \$1.2 million could be used for tax relief purposes. The impact to the mill rate would be a mill rate reduction of .20 mills; from 41.0 mills to 40.8 mills. This option might temper any concerns from tax payers that the purchase of the required trash bags is just another expense they would have to incur with no direct benefit to them. In this option, all else being equal, the direct benefit would be a reduction in property taxes.

## West Hartford's Solid Waste Program Goals

The Town's Plan of Conservation and Development (PoCD) empathizes the importance of sustainable waste management practices to promote the long-term health of our community. In furtherance of that objective, the Town's waste management goals are as follows:

- Reduce reliance and costs of incineration
- Grow and maintain a recycling/diversion rate of 60%, in accordance with the State's Solid Waste Management Plan
- Develop fiscal models that support a sustainable waste management program
- Introduce an EPA recommended best practices – Unit Based Pricing/Pay as You Throw
- Free recyclers from subsidizing wasteful neighbors
- Allow people to control spending on garbage by providing disposal options
- Save money by cutting trash and increasing recycling
- Become leaders in environmental sustainability
- Reduce the amount of solid waste generated/increase recycling rates
- Create enterprise fund using the revenues to subsidize public works projects and programs
- Increase equity by asking residents to pay only for the waste they generate

For the past 24 months, the Town has been evaluating various options to identify the best solution to implement its waste management goals. These options include implementing a Save Money and Reduce Trash (SMART) program, expanding current recycling opportunities, privatizing trash services, or franchising trash services. In staff's view, SMART potentially represents the best option to achieve these goals. In this memo, we will provide an overview of our current waste management system and the challenges we face, and explain the benefits of SMART and how a pilot program could work.

## Municipal Profile

### General Information

West Hartford is comprised of 62,903 residents and 25,319 housing units with 2.49 persons per household according to the 2010 Census estimates.<sup>1</sup> Roughly 68% of the housing units or 17,166 units are single family residential, 8% or 1,904 are two family and 4% or 987 are three family. The Town provides curbside trash collection to properties with three (3) or fewer dwelling units as well as some condo units and apartments. Automated trash collection is provided to 21,466 housing units.

Type of Housing Structure				
Single Family	Two Family	Three Family	Condominium	Apartment (4 units or more)
68%	8%	4%	9%	11%
17,166	1,904	987	2,353	2,909

In the upcoming fiscal year, West Hartford will dedicate \$4,222,520 or 1.46 % of the General Fund Budget or 3.98% of the Town Services (non-education) portion of the General Fund budget to provide solid waste collection and disposal. The costs are broken out by Yard Waste Collection and Disposal at

\$224,962, Municipal Solid Waste Collection and Disposal and Collection at \$2,729,633 and Recycling Collection and Disposal at \$1,267,926. The cost per housing unit is \$196.70 per year.

The cost of waste management is going up and will continue to increase. Waste material management is currently undergoing a revolution driven by Connecticut's waste disposal crisis caused by the diminishing capacity of the State's waste disposal options.

The State of Connecticut expects municipalities to improve recycling programs to divert or separate materials for recycling to their best and highest values. A 60% diversion rate by 2024 has been set by Department of Energy and Environmental Protection. The Town's current diversion rate is 26.6%.

### Residential Municipal Solid Waste (MSW)

West Hartford's residential solid waste is brought to Covanta Energy located in Bristol Connecticut. Covanta is a resource recovery facility which processes waste into energy. The original contract with Covanta was executed on November 8, 2012 and was extended until June 30, 2019. The tipping fee increased 15.95% since the beginning of the contract. The Town of West Hartford received a \$3.50 transportation subsidy during the first five years of the contract as an incentive to move its MSW from Hartford to Bristol. The transportation subsidy was a pass-through cost which was credited to Paine's the Town's trash hauler during the same period. The transportation subsidy and subsequent pass-through to Paine's expired in 2017. Tipping fees are paid by the General Fund.

The tipping fee is projected to rise at the end of the contract. According to Covanta, "there is extreme pressure on the industry as we struggle to remain profitable in a declining energy market." "It becomes difficult to justify reducing tip fees in light of the market conditions we are in today and the expected conditions anticipated for the immediate near future." Further Covanta noted that Materials Innovation and Recycling Authority (MIRA) also revealed at a Board meeting they are subsidizing their tip fees by \$31 per ton out of reserve dollars and their true tip fee cost is closer to \$100. This year West Hartford will be paying \$68.13 per ton to incinerate its trash.

Tip Fee Structure					
Year	Tip Fee Per Ton	Net Increase	Transportation Subsidy	Net Tip Fee	Net Increase
2012	\$58.75		\$3.50	\$55.25	
2013	\$60.22	2.50%	\$3.50	\$56.72	2.66%
2014	\$61.72	2.50%	\$3.50	\$58.22	2.65%
2015	\$63.27	2.50%	\$3.50	\$59.77	2.65%
2016	\$64.85	2.50%	\$3.50	\$61.35	2.65%
2017	\$66.47	2.50%	Expired	\$66.47	8.35%
2018	\$68.13	2.50%	Expired	\$68.13	2.50%
	Total Increase	15.97%		Total Increase	23.31%

Last year's annual disposal rate for residential waste was \$1,146,359.84. This year's estimate is expected to be \$1,256,000, an increase of 9.56%.

## Collection Information (Curbside)

The Town provides several curbside collection opportunities for waste removal. A contracted hauler collects MSW and recycling for non-commercial residential properties and all municipal properties. Fall leaf collection, Christmas tree collection, and spring yard waste collection is provided by Town crews.

Paine's Incorporated provides weekly recycling and weekly MSW collection under the town contract. The contract remains in effect until September 2023 and may be extended for two additional two year extensions for a possible 10 year contract. All collection and disposal costs are covered in the tax base. The cost of MSW collection is \$1,377,600 per year. The fee is adjusted upward or downward each year to reflect changes in the cost of doing business as measured by fluctuations in the US City Average Consumer Price Index (CPI). As the economy grows, so will the costs of collection.

A 95 gallon MSW cart was provided to eligible residents at the beginning of the collections contract in 2007. The Town owns all MSW carts. A policy decision was made to provide 65 gallon carts to any new eligible residents beginning May 1, 2017 to promote reducing trash and encourage recycling.

Paine's also provides bulky collection service. Residents can obtain a permit for curbside bulky waste collections. Permits can be obtained by credit card 24-hours a day from the Town's website or by contracting Paine's directly. Bulky collections include appliances, mattresses and box springs, metal waste and bulk waste loads equal to a standard sized pick-up truck.

	FY 13	FY 14	FY 15	FY 16	FY 17
Tons of Refuse Collected	19,525	19,551	18,938	19,533	18,824

A new curbside textile collection service provided by Simple Recycle was recently added to the mix.

Private haulers collect MSW and recycling for residential property with more than three units, condominium and apartment complexes and well as for all other commercial entities. There are 11 private haulers registered in West Hartford who collect from these and all other commercial entities.

## Collection Information (Drop-off Center)

The Town operates a drop-off center located at 25 Brixton Street. The site provides for recycling of waste but is not a MSW transfer station. Plans to redesign the site are underway. More opportunities are needed for construction and demolition debris disposal and bulky waste disposal, in addition to providing other recycling opportunities including food waste diversion.

## Residential Recycling

### Curbside Recycling

Weekly single stream curbside recyclables collection is available to properties with three (3) or fewer dwelling units as well as some condo units and apartments. Acceptable recyclables include mixed paper, corrugated cardboard, chipboard, glass, metal cans and food trays, aerosol cans, plastics, and cartons.

Recyclables collection is paid through the tax base. The recycling budget for FY19 is \$1,267,926 which includes the cost of management, collection and the operation of the Yard Waste and Recycling Center. The cost of recyclables collection is \$1,094,700. As with refuse collection, the collection cost is adjusted

upward or downward each year to reflect changes in the cost of doing business as measured by fluctuations in the US City Average Consumer Price Index (CPI). The cost to operate the Yard Waste and Recycling Center is \$124,000 per year.

In 2007, residents were provided 95 gallon carts for curbside recycling. These recycling carts are the property of the Town of West Hartford.

### Processing of Recyclables

Collected recyclables are delivered to Murphy Road Recycling LLC material recovery facility located at 655 Christian Lane in Berlin CT. Murphy Road Recycling was awarded a three (3) year contract on January 1, 2017 with two (2) one year renewal periods. Murphy Road Recycling LLC pays the Town \$5.00 per ton for mandated uncontaminated recyclables. When loads contain more than 10% contaminated materials, Murphy Road LLC charges the town \$10.00 per ton, and if the load exceeds 15% contamination, Murphy Road LLC charges the town \$85.00 per ton. All loads are screened as they are tipped and graded by a loader operator. If the ACR (average commodity revenue) exceeds \$80.00 per ton the payment will increase to \$10.00 per ton for that period of time. However increases are not expected.

Contamination Percentage	Recycling Rebate Paid
0%-10%	100%
11%-15%	\$10.00 per ton charge
15% or more	\$85.00 per ton charge

The rebate for recyclables have decreased over the past few years. This trend is expected to continue. In July 2017, the Chinese government filed a notice with the World Trade Organization (WTO) proposing to ban the import of 24 solid waste materials including certain type of plastic and paper. Beginning in March 2018 the Chinese government imposed a .5 percent contamination standard and has intentions to implement a 25% tariff on imports of aluminum and scrap. According to the 2018 Outlook for Solid Waste Drivers and Companies report, “recycling results remain wildcard, while fuel has begun to march higher, recycling will be a drag on industry earnings”, making the recycling industry unpredictable and volatile.

Recycling	FY 13	FY 14	FY 15	FY 16	FY 17
Rebate Revenues	\$58,406	\$82,418	\$79,059	\$50,352	\$38,378
Tons	7,180	7,152	6,994	7,014	6,652

The total tons of recycled waste has been stagnant over the past several years. The Town began weekly recycling on July 1, 2017 but the recycling rates have not increased as expected.

	FY 13	FY 14	FY 15	FY 16	FY 17
Tons of Waste Recycled	7,180	7,152	6,942	7,017	6,853
Percent of Total Waste Recycled	26.7%	26.8%	26.8%	26.4%	26.6%

## Drop-off Center for Recyclables

The Town provides a drop off center where residents can bring some types of recyclable material. The Yard Waste and Recycling Center located at 25 Brixton Street provides residents with an opportunity to drop off wood chips, chunk wood and stump grindings, brush, leaves, grass, clean fill, scrap metal, plastic and cardboard, waste oil, car batteries, clothing and textiles, paint, mattresses, and electronics.

Residents are charged an annual permit fee to use the facility. The fees range from \$10.00 a year for passenger vehicles to \$35.00 per year for pickup trucks with trailers.

Passenger Vehicles, SUV's, CUV's & Mini-Vans w/o trailer	\$10.00
Passenger Vehicles, SUV's CUV's & Mini-Vans w/trailer	\$15.00
Pick-up trucks, Full size vans, w/o trailer	\$25.00
Pick-up trucks, Full size vans w/ trailer	\$35.00

The Drop-off Center is operated by Supreme Forest Products. Supreme Forest Products was awarded a contract in 2015 to operate, manage and maintain the yard waste and recycling center. The Town pays Supreme \$112,500 per year for this service. The contract with Supreme ends on August 30, 2020 but may be extended for three (3) years up to three times upon mutual agreement.

From July 2016- June 2017 the Yard Waste and Recycling Center received the following materials

	Commercial	Residential	Municipality
Leaves (cubic yards)	21268	668	6606
Stumps (cubic yards)	494		30
Brush (cubic yards)	2881	759	1345
Stump Grinding (cubic yards)	1406		193
Chunkwood (cubic yards)	5913		308
Clean Wood (cubic yards)	3	25	
Grass (cubic yards)	1159	266	30
Aggregate/Fill (cubic yards)	3992	65	2278
Total cubic yards of green waste	<b>37116</b>	<b>1783</b>	<b>10790</b>
Car Batteries (tons)		1.5	
Waste Oil (gal)		4200	
Antifreeze (gal)		900	
Scrap Metal (tons)		44.94	
Mattresses (units)		1164	
Paint (tons)		8.7	
Electronics		42.67	
Textiles		5.96	

The Town included language in its 2015 RFP to operate the Yard Waste and Recycling Center to consider alternative proposals to provide an approach showing how savings and revenues can be obtained by the town while satisfying the Town's need to obtain a full service provider to operate, maintain and manage the Yard Waste and Recycling facility. The Yard Waste and Recycling Center sits on the former Town

dump and operates in the former incineration building. The incinerator building is not operational and currently offers no or limited opportunity for re-use. A redesign and expansion will provide the residents with more responsive services. The updated design will better meet today's needs, improve on the flow in and out of the center, and allow for greater opportunities to recycle.

Supreme Forest Products offered a proposal to include the demolition of the incineration plant, redesign the entrance in and out of the facility and improve the functionality of both the residential drop off area and commercial yard, and offer food waste recycling services to residents.

The Town received a \$200,000 Brownfield Grant to help with the redevelopment of the site from CT Department of Economic and Community Development (DECD) for an Environment Assessment and Remedial Action Plan, which is in progress.

In the 2018-2029 Program for Capital Improvements, the Town Council adopted a capital improvement program which included a \$2.5 million appropriation to modernize the Recycling Center in program year 2018-2019 of the plan. The 2019-2030 Program for Capital Improvements moves the \$2.5 million funds from 2018-2019 to program year 2019-2020 under the Town Manager's recommended summary of capital improvements. Abatement of the facility is estimated to cost \$600,000.

### Commercial MSW

Commercial waste pertains to that portion of waste that is generated by businesses and large multi-family buildings, such as apartments and condominium associations

Commercial waste is handled privately in West Hartford. Private haulers are required to register with the Town of West Hartford each year and obtain a permit under Town Ordinance 94-2. However many haulers are non-complaint. Commercial businesses pay for the collection and disposal of materials.

Commercial entities do not have access to use the Yard Waste and Recycling Center under a Town permit, however Supreme Forest does allow for the disposal of yard waste for a fee.

The Town does not maintain records relating to commercial waste, so the amount of waste and recycled materials from commercial entities is not known by the Town. Commercial waste haulers are required to provide information to the State of Connecticut annually.

### Miscellaneous Materials

Leaves and yard waste are accepted at the Town's Yard Waste and Recycling Center and composted. Leaf compost is available for West Hartford residents and is delivered in quantities of 1 - 6 cubic yards for a \$79.50 delivery charge.

Each spring and fall, the MDC conducts a regional household hazardous waste collection program at a series of local sites in member and non-member towns. Two collections are held in West Hartford each year. Many hazardous materials are accepted during the collection including batteries, chemicals, fluorescent bulbs, mercury, lawn care, paint, asbestos, and electronics.

A food diversion program has been added at West Hartford Public Schools.

## Waste Reduction Initiatives

In 2016 the Department of Energy and Environmental Protection (DEEP) updated the State Solid Waste Management Plan which includes a strategy for diverting waste through source reduction, reuse and recycling not less than sixty percent (60%) of the solid waste generated in the state after January 1, 2024. If the Town continues its current practices of waste management, the Town will not be able to meet the state-mandated reduction and recycling goals by 2024.

At the Departmental level alternative programs have been explored including educating the public of the benefits of a Save Money and Reduce Trash (SMART) program. A SMART program is highly recommended and supported by the DEEP.

In 2016, the Town received a grant to explore SMART. The Town contracted with Waste Zero to propose and educate the public about a fairer and more equitable system of solid waste finance that can reduce landfilled/incinerated waste and increase recycling. The initial analysis showed a SMART program can reduce the amount of trash sent to incineration by 44% for a \$550,790 savings and increase revenues by \$1,681,457 in bag sales to create less dependence on the tax base. With support from DEEP, management is proposing a SMART pilot project for West Hartford to help reduce the rising costs of trash disposal while meeting the goals of the State.

Other initiatives of the Department include offering weekly recycling, and providing an experimental food waste collection program. Organics collection has been added at the schools. Tools have also been added for the public including a waste wizard to help with recycling questions. The Town has also enhanced the website, restructured the yard waste and recycling permit process and added more options to recycle including electronics collection, mattress collection, and paint collection.

Details of a SMART program are covered in the following sections.

## A SMART PILOT

### Save Money and Reduce Trash (SMART)

SMART is a Pay-As-You-Throw (PAYT) system. SMART is a different way of paying for waste collection and disposal services. The system motivates people to recycle more and to think about ways to generate less waste in the first place.

The most important advantage may be the fairness and greater control over costs that it offers. Under SMART, everyone pays only for what they generate-so residents won't have to subsidize their neighbor's wastefulness any more. It's only fair. With SMART, when you recycle and prevent waste, you're rewarded with a lower bag fee.

Because of these potential cost savings, the public will naturally want to reduce the amount of waste they generate.

In addition, the incentive to put less waste at the curb can make a big environmental difference. When people generate less waste and recycle more, fewer natural resources are used and there is less pollution from manufacturing. Valuable landfill space is conserved as well, reducing the need to site new facilities



SMART also reduces global Greenhouse Gas Emissions (GHG). In West Hartford, the estimated global GHG reduction attributed to SMART is 19,242 Metric Tons of Carbon Dioxide Equivalent (MTCO<sub>2</sub>E). Since West Hartford does not have a carbon inventory, other municipalities (Raleigh NC, Summerville MA, Boston MA, Asheville NC, and Chicago Ill) with recent carbon inventories along with the State of CT (overall carbon inventory) were used to provide an estimate of West Hartford's GHG inventory, as well as the percentage of carbon associated with all city controlled activities (including facility buildings, water / waste water, fleet vehicles (police, fire, other), streetlights, city employee commutes, solid waste and other). This estimate suggests a per capita MTCO<sub>2</sub>E of about 10, leading to a town wide inventory of 632,680 MTCO<sub>2</sub>E and a Town controlled inventory of 15,000 MTCO<sub>2</sub>E. The global GHG reduction from SMART is estimated to be equal to 128% of town controlled inventory and 3% of total town inventory. There is no other action under the town's direct control that would yield that level of global GHG impact.

West Hartford would also receive credit through Sustainable CT for its SMART efforts to date, as well as full credit if the town implements SMART. Sustainable CT also recognized the power of SMART and therefore allocates extra points to all other waste reduction efforts by the Town. For instance, if the Town were to implement SMART it would receive additional points for the curbside textile collection program (more points than another town that implements textile collection and does not have SMART) this would be true for all other waste reduction efforts.

SMART is a more efficient and fiscally responsible way to fund solid waste services. Residents pay for trash services differently: Partly through taxes and partly through a bag fee.

## Common Concerns

There are always questions and concerns over how this new program affects the taxes and whether there will be any real savings. Common questions arise such as "Will there be a tax rebate?", or "How will I be saving by purchasing these expensive bags?"

The revenues from the bag sales are a redistribution of local taxes. Unlike the ad valorem tax which is a progressive tax based on the value of a one's home and property, the revenue generated from the bag sales is a proportional tax or flat tax, meaning the fee is the same regardless of income or wealth. The benefit is that it's equitable. The more you reduce your waste, the more you will save over time. The current local tax system does not incentivize reduction, it incentivizes waste because there are no immediate consequences of throwing garbage away. The resident doesn't even know they are contributing to higher taxes every time they throw away an item meant for recycling, but they are. This program stabilizes future increases making waste management more sustainable over time.

The savings generated from decreases in tip fees and bag revenues can be used to increase services while not increasing taxes. Instead of increasing taxes for road or park maintenance or to purchase equipment, the town can leverage the savings to supplement those programs or add programs to encourage recycling.

One such program considered is an expansion of the Yard Waste Collection and Disposal program. The program would further reduce tip fees, and provide residents with additional services. The benefit of an expanded yard waste program is that it gives the residents better opportunities to recycle yard waste. Per Connecticut State law, grass clippings and other yard wastes are prohibited from disposal at

resource recovery facilities or solid waste facilities. This means grass clippings are prohibited from being disposed of in the green trash cart or blue recycling cart. Yard waste disposed in refuse carts is heavy which increases the Town's per ton cost to incinerate. Every time a load of trash is rejected, the Town of West Hartford is fined and has to pay the clean-up costs. These costs translate into a tax expenditure that is truly controllable by behavioral changes by the public.

The collection program would run on a bi-weekly basis from April through October, and a weekly collection from October through December for fall leave collection. The bi-weekly schedule would run on the A and B recycle schedule previously used when bi-weekly single stream recycling was offered. The net increase of this expanded yard waste program is expected to be \$74,171 per year.

## SMART Budget Going Forward

One of the benefits of a Town implemented SMART program is that it could protect the erosion of operating funds for other programs within Public Works. Since our waste program is contracted out, there is little room to cut expenses in this area if departmental cuts are requested. As time goes on, and the department is asked to consider budget cuts and if a SMART program is not implemented DPW will be forced to cut other areas of the operation. This would erode our ability to properly maintain roads, care for our grounds and parks, and maintain the Town's infrastructure.

Waste management costs will increase if nothing is done. If the Town implements the expanded Yard Waste Collection and Disposal program and does not implement a SMART program, the cost of waste management is expected to increase 2.5% per year based on contractual agreements and cost of living increases. By 2024, the net increase over the current year budget will be \$638,791.

<b>Yard Waste Collection <u>no</u> SMART</b>							
<u>Expense</u>	Current	Proposed FY 19	Proposed FY 20	Proposed FY 21	Proposed FY 22	Proposed FY 23	Proposed FY 24
Refuse Collection & Disposal*	2,729,632.88	2,647,632.88	2,713,824	2,781,669	2,851,211	2,922,491	2,995,554
Recycling Collection & Disposal	1,267,925.53	1,267,925.53	1,299,624	1,332,114	1,365,417	1,399,553	1,434,541
Yard Waste Collection and Disposal**	224,961.63	381,132.63	390,661	400,427	410,438	420,699	431,217
	<b>4,222,520.04</b>	<b>4,296,691.04</b>	<b>4,404,108.32</b>	<b>4,514,211.02</b>	<b>4,627,066.30</b>	<b>4,742,742.96</b>	<b>4,861,311.53</b>
Net <u>Increase</u> over current year budget		<b>74,171.00</b>	<b>181,588</b>	<b>291,691</b>	<b>404,546</b>	<b>520,223</b>	<b>638,791</b>

If the Town implements the expanded Yard Waste Collection and Disposal program and also implements a SMART program, the cost of waste management will continue to increase, however the tip fee savings will offset the increases over the next five years. The first year will realize savings of over \$485,000, but the savings will be reduced over the period as waste management costs increase.

<b>Yard Waste Collection <u>with</u> SMART</b>							
<u>Expense</u>	Current	Proposed FY 19	Proposed FY 20	Proposed FY 21	Proposed FY 22	Proposed FY 23	Proposed FY 24
Refuse Collection & Disposal*	2,729,632.88	2,087,632.88	2,139,824	2,193,320	2,248,153	2,304,356	2,361,965
Recycling Collection & Disposal	1,267,925.53	1,267,925.53	1,299,624	1,332,115	1,365,417	1,399,553	1,434,542
Yard Waste Collection and Disposal**	224,961.63	381,132.63	390,661	400,428	410,438	420,699	431,217
	<b>4,222,520.04</b>	<b>3,736,691.04</b>	<b>3,830,109.00</b>	<b>3,925,861.73</b>	<b>4,024,008.27</b>	<b>4,124,608.47</b>	<b>4,227,723.69</b>
Net <u>Savings</u> over current year budget		<b>485,829.00</b>	<b>392,411.04</b>	<b>296,658.32</b>	<b>198,511.77</b>	<b>97,911.57</b>	<b>-5,203.65</b>
*Decrease of \$560,000 for Tip Fee Savings for the SMART Program, Decrease of \$82,000 for Yard Waste Tip Fee Avoidance							
**Decrease of \$6,240 in Overtime, Decrease of \$30,000 in Truck Rental, Increase of \$48,000 for Solid Waste Disposal, Net increase of \$145,890 for Collection Services (\$-45,000 Temp Agency + \$190,890 Paines), Decrease of \$543 for Social Security due to decrease in overtime							

From a revenue perspective, if a SMART program is not implemented revenues are expected to be static over the next five years. The town currently generates approximately \$207,000 in revenues in bulky waste permit fees, recycling rebates, and fees for second barrels. Based on the analysis, if a SMART program were implemented, the Town can expect additional revenues of \$1.66 million. Over time this revenue can be used to modernize the recycling center, pay for the purchase of the Town's rolling stock and strengthen our pavement preservation program.

Revenues	Current	Proposed FY 19	Proposed FY 20	Proposed FY 21	Proposed FY 22	Proposed FY 23	Proposed FY 24
Refuse Collection & Disposal*	\$60,000	1,729,629	1,730,000	1,730,000	1,730,000	1,730,000	1,730,000
Recycling Collection & Disposal**	\$147,400	147,400	147,400	97,400	97,400	97,400	97,400
Total Expected Revenues	<b>\$207,400</b>	<b>1,877,029</b>	<b>1,877,400</b>	<b>1,827,400</b>	<b>1,827,400</b>	<b>1,827,400</b>	<b>1,827,400</b>
*Increase of \$1,669,629 in bag revenue							
** Decrease in recycling rebate and Covanta grant							
Net Revenue Increase with SMART		<b>1,669,629</b>	1,670,000	1,670,000	1,670,000	1,670,000	1,670,000
<b>New Alternative Approach to Fund Needed Programs</b>							
New Cash Capital Programs	Current	Proposed FY 19	Proposed FY 20	Proposed FY 21	Proposed FY 22	Proposed FY 23	Proposed FY 24
Recycling Center Modernization		600,000	1,000,000	900,000			
Rolling Stock Purchases		510,000	560,000	454,000	465,000	350,000	350,000
Pavement Preservation		559,629	110,000	316,000	1,205,000	1,320,000	1,320,000
Estimated cash to capital program		<b>1,669,629</b>	<b>1,670,000</b>	<b>1,670,000</b>	<b>1,670,000</b>	<b>1,670,000</b>	<b>1,670,000</b>

## How the Program Works

### Container and Pricing Choices

There are several systems used by over 8,000 communities across the United States implementing SMART programs. The three most commonly used systems are bag programs, tag or sticker systems or can systems.

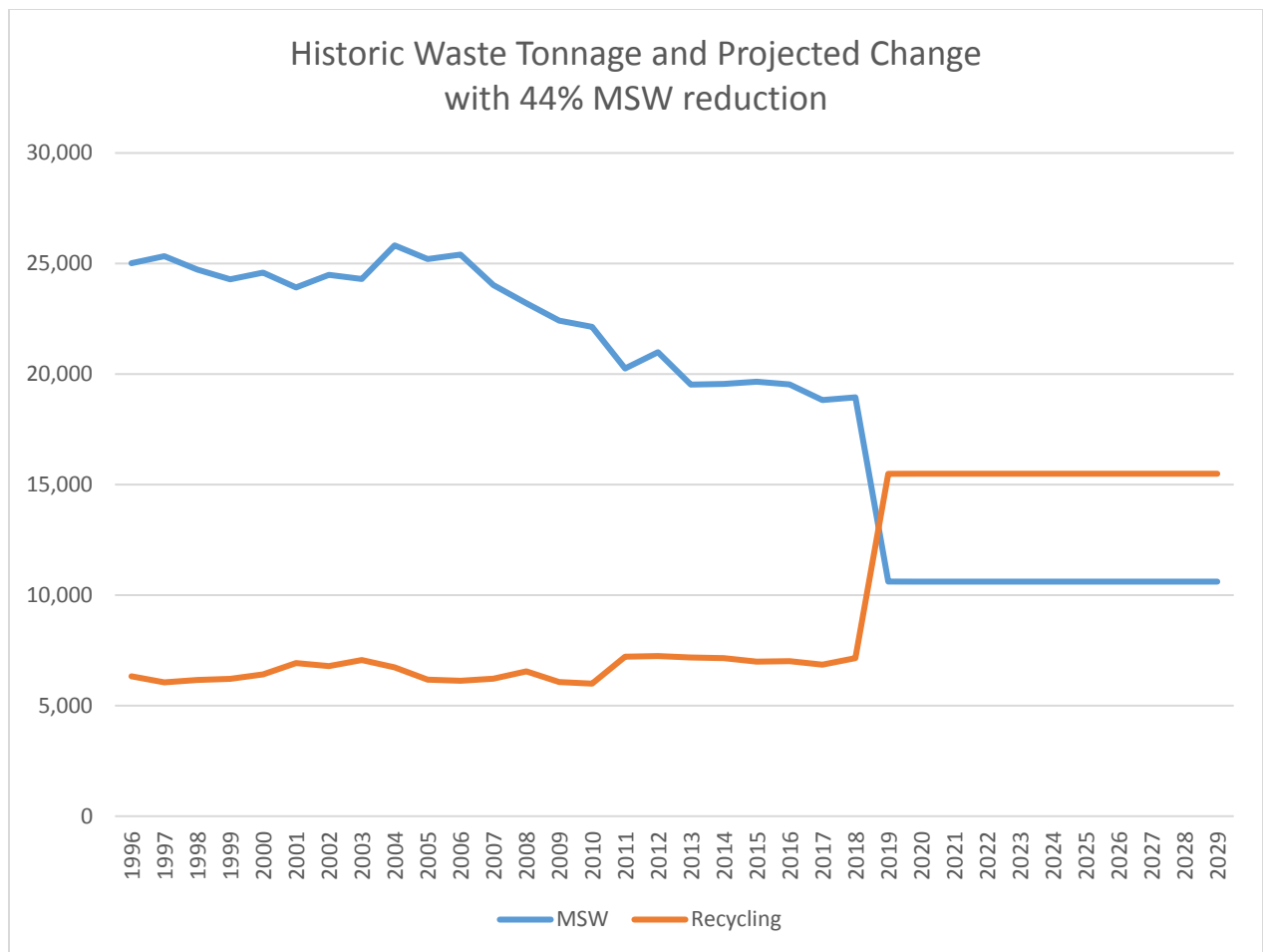
After analyzing the three systems, the bag system is preferred for West Hartford because there are lower start-up costs, no billing system needed making accounting costs are lower, and it's easy to monitor for compliance.

With the bag system, the only change to the way trash is disposed today is that MSW goes into a pre-purchased bag. According to the EPA, residents find the bag system convenient and easy to understand. Based on the analysis provided by Waste Zero, the bag system is the best choice for West Hartford.

### Rate Structure Design

#### Waste Collection Forecast

Waste Zero reported that residential trash will drop by 44% after the implementation of a SMART program. This information is based on data collected from hundreds of SMART/PAYT programs.



If a SMART program were to be implemented at the start of the fiscal year, it is estimated the tonnage of trash to incineration will decrease from 18,824 tons to 10,541 tons which is a reduction of 8,283 tons. The tipping fee starting July 1<sup>st</sup> will be \$68.13. At that rate the tip fee savings per year is expected to be \$564,321. The savings per month will be \$47,027.

### Program Costs

The rollout costs for a pilot project is \$52,500. These costs include a mailer which includes one bag and postcard for \$22,500 and a digital media campaign to ensure residents understand the impacts of the program at a cost of \$30,000.

There are very few program costs moving forward after implementation.

### How the program works

The Town works with local grocery and hardware stores to determine which stores agree to sell official bags as part of the Town's SMART program. Each store receives clear instruction on carrying out their role in the program. Upon order, the bag supplier delivers the customized trash bags directly to the retailers. The supplier bills the retailers. Each month the supplier reconciles the account and provides

comprehensive accounting reports for West Hartford to review. Each month the supplier collects money for the bags from the retailers and remits it directly to West Hartford.

In the weeks leading up to implementation, the Town will reach out to the public through a public awareness campaign. A postcard will be sent to all eligible residents which outlines the start date, program benefits, and other critical information. There will also be a digital awareness and education campaign along with a media briefing package.

An enforcement component will need to be implemented for the new program. The first recommendation of enforcement is the adoption of a SMART ordinance. The ordinance ensures the program rests on a firm legal foundation and will enforce bans on illegal diversion including dumping or burning of waste and adding non-recyclable materials to recycling bins.

During the first week of implementation, a monitoring system complete with a tablet and camera will note non-compliant addresses. Those addresses will be uploaded into a database. An “Oops” notice will be dropped off by the supplier of the bags at the offending address. During the second week, the supplier will visit these addresses to see whether they are compliant. If they find non-compliant bags, they will tag the cart with a non-compliant sticker. “Oops” notices will be delivered to any new first time offenders. After the first two weeks, if there are third time offenders, then the Town will send out an enforcement officer to visit the address, and assess a fine.

## Revenues

Waste Zero estimates the number of bags purchased in the first year will be 1,175,795 or 97,983 per month. The recommended charge per bag is \$2.00 for a large 30-gal trash bag, and \$1.25 for a smaller 15-gal trash bag.

The revenues during the first two months are offset by a charge for enforcement. So the revenues are adjusted downward for the first two months.

<b>First 2 Months - Enforcement Support Period (Enforcement support cost included in bag price.)</b>							
	Retail/Bag	Cost/Bag	Net to Town/Bag	Avg. Lbs/Bag	% of Bags Used		
Large 30-gal	\$2.00	\$0.42	\$1.58	21.25	60%		
Small 15-gal	\$1.25	\$0.32	\$0.93	12.95	40%		
						Wtd. Avg Lbs./Bag	Wtd. Avg. Net/Bag
						17.93	\$1.32

After the first two month the revenues are expected to increase.

<b>Ongoing - After Enforcement Period</b>							
	Retail/Bag	Cost/Bag	Net to Town/Bag	Avg. Lbs/Bag	% of Bags Used		
Large 30-gal	\$2.00	\$0.30	\$1.70	21.25	60%		
Small 15-gal	\$1.25	\$0.20	\$1.05	12.95	40%		
						Wtd. Avg Lbs./Bag	Wtd. Avg. Net/Bag
						17.93	\$1.44

It is projected the net revenues during the first two months will be \$258,675, and then the revenues will be \$1,410,954 during the next 10 months. The tipping fee savings is projected to be \$94,053 during the first two months, and then will increase to \$470,267 during the following 10 months.

BUDGET PROJECTION			
	Enforcement Pd. (1st 2 Mos.)	Ongoing (Next 10 Mos.)	TOTAL
# Bags Sold	195,966	979,829	1,175,795
Net Bag Revenue to Town	\$258,675	\$1,410,954	\$1,669,629
Tip Fee Savings	\$94,053	\$470,267	\$564,321
Mobile311 System Cost	-\$3,667	-\$18,333	-\$22,000
Net Benefit to Town	\$349,061	\$1,862,888	\$2,211,949

## Potential Barriers

There are potential barrier which might affect the program. Some common barriers and solutions are listed below.

Potential Barriers	Possible Solutions
Perception that waste collection is free/SMART is a tax increase	<ul style="list-style-type: none"> <li>• Educate residents about SMART</li> <li>• Set prices at levels residents will accept</li> </ul>
Perception that program might hurt low-income residents	<ul style="list-style-type: none"> <li>• Offer these residents rebates, coupons, or discounts</li> <li>• Offer free bags to recipients of general assistance</li> </ul>
Multi-family Housing	<ul style="list-style-type: none"> <li>• Include charges in rent</li> <li>• Have tenants purchase bags</li> </ul>
Illegal dumping	<ul style="list-style-type: none"> <li>• Educate residents about pay-as-you-throw</li> <li>• Provide several legal diversion options</li> <li>• Develop enforcement plan</li> </ul>

## Public Outreach

### Educating the Community

The supplier will provide materials to help leaders announce the program's launch. These materials will include a post card and a flyer. A digital awareness and educational campaign will also be launched. This campaign will consist materials designed for creative messaging which will be sent out via Facebook, Twitter and other social media outlets. A toll free number will be set up by the supplier with pre-recorded information such as where to buy bags, bags sizes and costs, and will provide other important information. Educational materials will be provided that will cover a range of useful topics. The materials

will be provided to residents, school groups, community organizations and environmental organizations. A media briefing package will also be provided with talking points and press releases.

## Implementation Checklist

Pre-Decision Checklist			
Step	Activity	Description	Completion Date
1.	Present Recommendation to Planning Committee	Use analysis, initial feedback from stakeholders and SMART communities to make recommendation to include timeline, rollout plan, budget and compliance/enforcement plan	
2.	Issue RFP for Program Execution	Use RFP to confirm all start-up costs, compliance monitoring costs, rollout plan and projected revenue	
3.	Visit to SMART Community	Director of Public Works and Council Members visit Middleton, RI	
4.	Decision to proceed with the Program	Final costs and rollout plan presented to council for decision	

Pre and Post Launch Checklist			
Step	Activity	Description	Completion Date
5.	Supplies Requirement Submitted	Vendor provides program toolkit	
6.	Distribution and Retailers	Supplier creates and sends letters and collateral to retailers	
7.	Services and Communications	Vendor submits final proof for Program Brochure to West Hartford	
8.	Program Launch	Start collecting bags under the PAYT program	
9.	Measure Results	Monthly capture of data and monitoring	
10.	Citizen Advisory Council Review of Results	Quarterly Advisory committee review	

## Monitoring and Evaluation

A Citizen Advisory Committee will meet on a quarterly basis after launch. The Council appointed Advisory Committee will review key metrics and public and/or key stakeholder feedback as warranted. Committee will make a recommendation about the program after 18 months of operation.

## Program Enhancements

The savings gained by reducing the amount of waste sent to incineration, and the revenues generated from the bag sales can be used to expand DPW programs and services. An expanded recycling program will provide residents with more opportunities and options to recycle waste, further reducing the tonnage sent to incineration. Expanded services includes lengthening our yard waste curbside collection program from a three week program to a nine month program. Approximately \$82,000 of the \$560,000 tip fee savings would be used toward the expansion of the yard waste program. This estimate is based on an increase of \$194,000 in collection and organics waste disposal costs, offset by a reduction of \$112,000 in tip fee avoidance and vehicle leasing costs for a net program increase of \$82,000.

The redesign and expansion of the incinerator site will provide our residents with more responsive services. The updated design will better meet today's needs, improve on the flow in and out of the center, and allow for greater opportunities to recycle. The revenues generated in the first year can offset the estimated \$600,000 in abatement costs that is currently held in the capital improvement fund as well as provide funding for site design and engineering.

The savings can also be used to offset yearly capital equipment costs such as vehicles and equipment replacements. Each year approximately \$500,000 in capital funding is allocated toward upgrading the Town's rolling stock based upon the condition of existing inventory and expected useful life. Instead of adding to the Town's long-term debt service, the expenditures can be funded through a vehicle replacement fund.

Should the pilot turn into full scale implementation, the tip fee savings would offset yearly capital equipment costs such as replacement vehicles and equipment. The funding can also be for the preservation of street surfaces, grounds improvements and resources needed to maintain the Town's aging infrastructure. The revenues would also offset solid waste disposal and collection costs going forward.

## Conclusion

Diverting waste from incineration would have a direct positive fiscal impact on the Town's finances. Each ton diverted avoids additional tipping fees. Tipping fees are expected to increase as capacity to accept materials decrease across the State.

At the Departmental level alternative programs have been explored including educating the public of the benefits of a SMART program, offering weekly recycling, and providing an experimental food waste collection program. Organics collection has been added at the schools. Tools have been provided to the public including a waste wizard to help with recycling questions, an enhanced website, a restructuring of the yard waste and recycling permit process and added more options to recycle including electronics collection, mattress collection, and paint collection. An expanded recycling program will provide residents with more opportunities to reduce the tonnage sent to incineration.

The objective of the solid waste management program is to provide cost effective service, best practices, sound planning, and provide good stewardship of public funds. A SMART bag program helps the Town meet all its objectives.



1. Cost effective service: SMART changes the funding model in a way that incentivizes residents to waste less, therefore driving disposal costs down.
2. Best practices: The SMART funding structure reduces general fund dependence moving a portion of the cost to the user.
3. Sound planning: The SMART bag program incentivizes residents to participate in other town recycling services (electronics, hazardous waste, etc.) as well as in future services like organic material collection
4. Stewardship of public funds: A SMART program allows residents to control their own cost and allows for the better use of funds.

Based on the analysis, SMART appears to be the best option to achieve the Town's waste management goals. In order to verify that SMART is the best long-term solution, staff is recommending an 18-month pilot program.

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<sup>i</sup> Sources: U.S. Census Bureau, 2010 Census of Population, P94-171 Redistricting Data File.  
EPA's Web Archive-Conservation Tools Pay-As-You-Throw